

Appl. No. 10/087,691

Attorney Docket No. 10541-1904

**I. Listing of Claims**

1. (Canceled)

2. (Original) A method of equalizing an input signal for a digital signal processor (DSP) which produces an output signal having a desired frequency response, comprising the steps of:

transferring a jump and lookup table from nonvolatile memory to volatile memory, said jump and lookup table containing addresses to execute equalization structures of the DSP;

transferring a plurality of filter coefficients from said nonvolatile memory to said volatile memory, said plurality of filter coefficients provide optimum equalization structures to obtain said desired frequency response;

retrieving one of said addresses by use of a first pointer to execute a first equalization structure;

retrieving a corresponding set of filter coefficients by use of a second pointer to provide a first equalization structure;

producing an intermediate result in response to filtering said input signal;

incrementing said first pointer to next said addresses of said jump and lookup table to execute a subsequent equalization structure;

incrementing said second pointer to next said corresponding set of filter coefficients to provide a subsequent equalization structure;

transferring said intermediate signal to said subsequent equalization structure for additional filtering,



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incrementing said first pointer and said second pointer to provide next said subsequent equalization structure for additional filtering;

transferring said intermediate result as an equalized output signal when said first pointer indicates filtering is complete.

3. (Original) The method of claim 2 wherein said frequency response includes a set of separate frequency bands.

4. (Original) The method of claim 2 wherein said equalization structure uses a plurality of equalization structures.

5. (Previously Presented) The method of claim 4 wherein a first equalization structure has a first equalization characteristic and a second filter structure has a second filter characteristic.

6. (Original) The method of claim 2 wherein said equalization structure uses one equalization structure repeatedly.

7. (Original) The method of claim 2, wherein said input data signal is an audio signal and said jump and lookup table and said sets of filter coefficients are adapted to provide predetermined equalization according to a plurality of frequency bands customized to acoustical characteristics of a predetermined automobile interior.



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8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)



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20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)



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